A. Appendix

A.1 Schematics

Figure A-1. PSoC 4200M Schematic

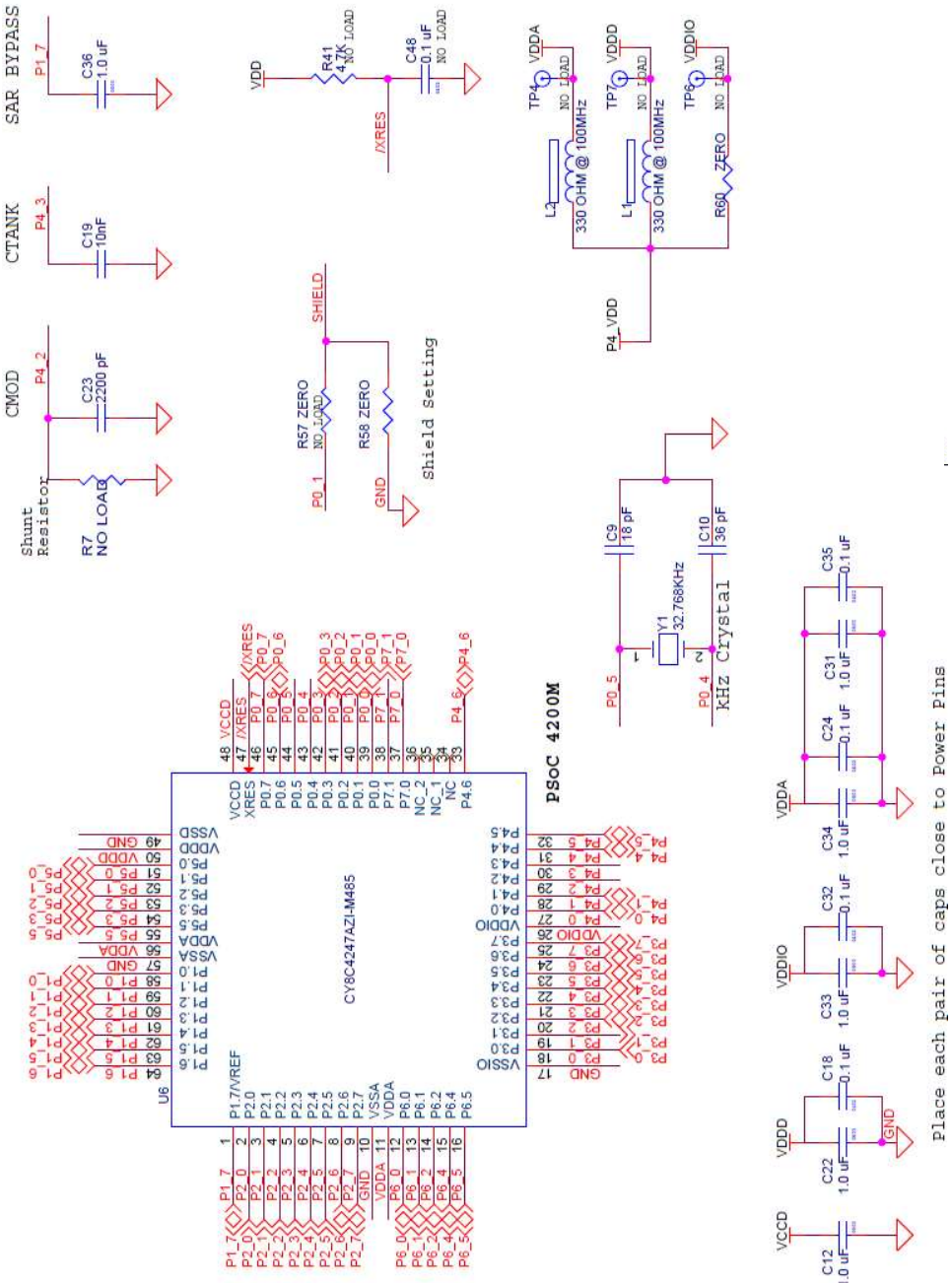


Figure A-2. KitProg (PSoC 5LP) and Programming Interface Schematic

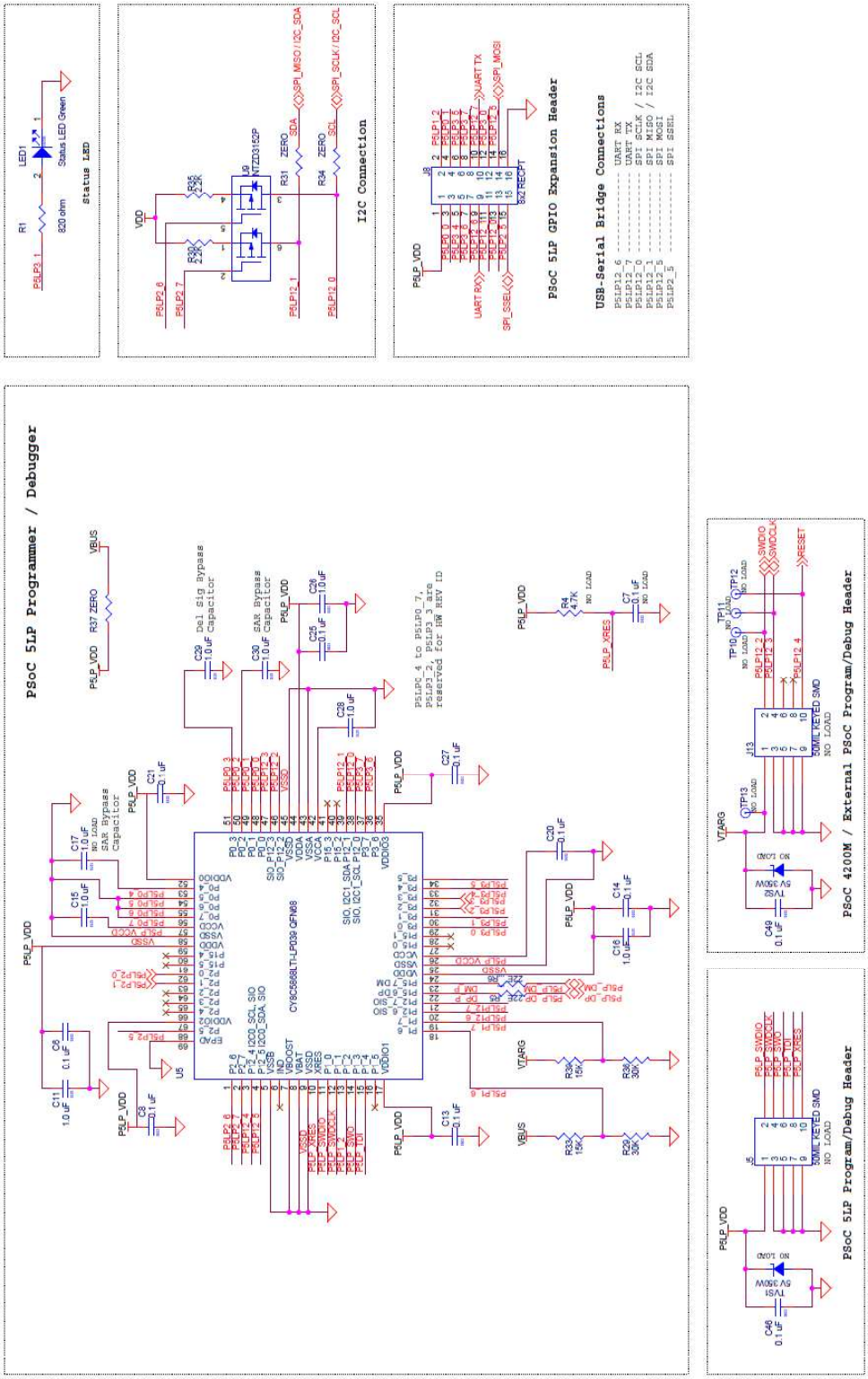


Figure A-3. Power Supply and Power Monitoring Circuit Schematic

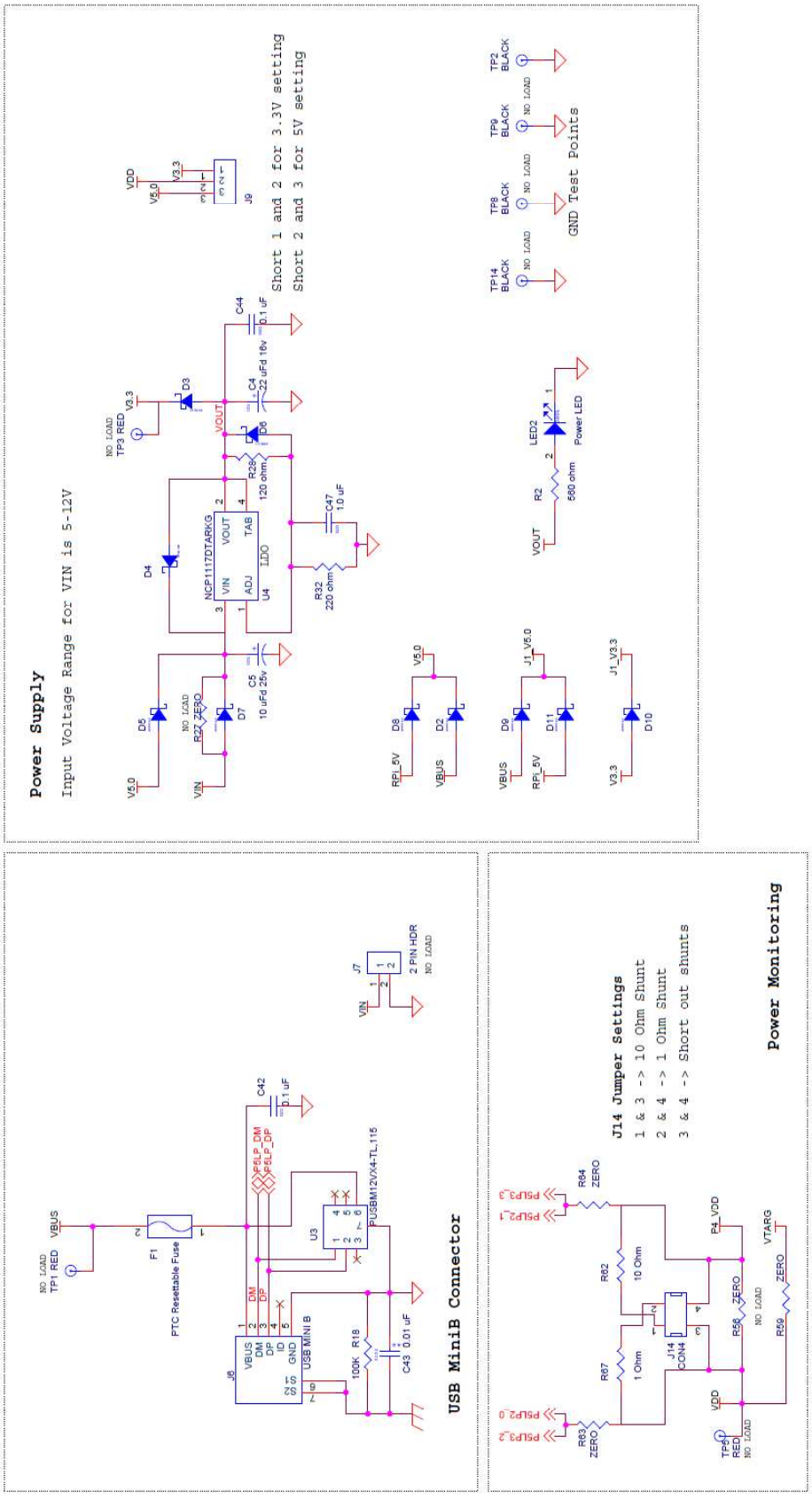
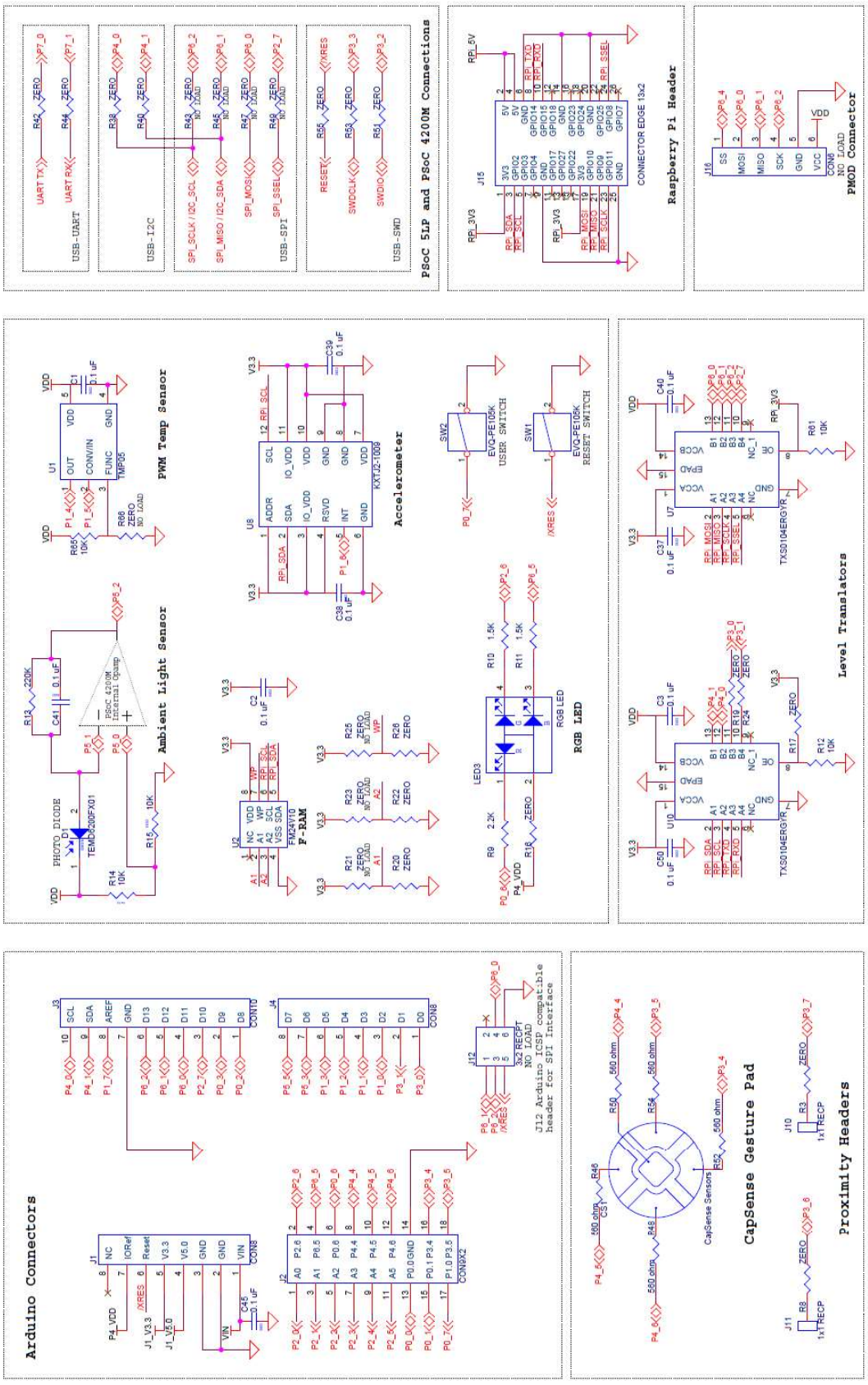


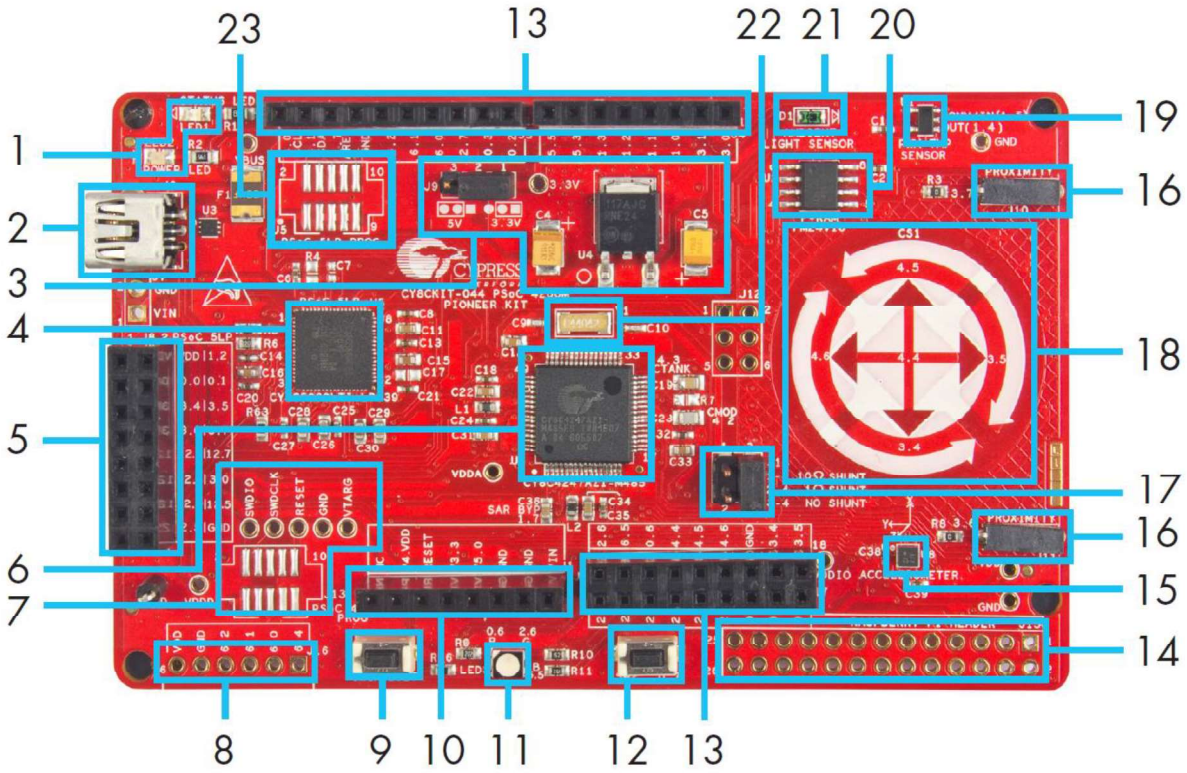
Figure A-4. Peripheral Schematic



A.2 Hardware Functional Description

This section provides detailed explanation on individual hardware blocks of the PSoC 4 M-Series Pioneer Kit. Complete schematic of the PSoC 4 M-Series Pioneer Kit can be accessed from the PSoC 4 M-Series Pioneer Kit web page or the kit install directory.

Figure A-5. Board Highlight of Hardware Components



A.2.1 PSoC 4200M

This kit uses the PSoC 4200M (CY8C4247AZI-M485) family device (marked **6** in Figure A-5). PSoC 4 is a scalable and reconfigurable platform architecture for a family of programmable embedded system controllers with an Arm Cortex-M0 CPU. It combines programmable and reconfigurable analog and digital blocks with flexible automatic routing. The PSoC 4200M device family, based on this platform architecture, is a combination of a microcontroller with digital programmable logic, programmable analog, programmable interconnect, high-performance analog-to-digital conversion, opamps with comparator mode, and standard communication and timing peripherals. The PSoC 4200M products will be fully compatible with members of the PSoC 4 platform for new applications and design needs. The programmable analog and digital subsystems allow flexibility and in-field tuning of the design. For more information, refer to the PSoC 4200M web page and the PSoC 4200M Family Datasheet.

A.2.2 PSoC 5LP

An onboard PSoC 5LP (CY8C5868LTI-LP039) is used to program and debug the PSoC 4200M device (marked **4** in Figure A-5). The PSoC 5LP connects to the USB port of the PC through a USB Mini-B connector and to the SWD interface of the PSoC 4200M device. PSoC 5LP is a true system-level solution providing MCU, memory, analog, and digital peripheral functions in a single chip. The CY8C58LP family offers a modern method of signal acquisition, signal processing, and control with high accuracy, high bandwidth, and high flexibility. Analog capability spans the range from thermocouples (near DC voltages) to ultrasonic signals.

For more information, visit the PSoC 5LP web page. Also, refer to the CY8C58LP Family Datasheet.